6. Presentation and Q & A: Performance Measure Assessment – Review of VISSIM and other Performance Assessments

Phil Erickson

Community Design + Architecture

Jim Schoen

Principal, Kittleson & Associates, Inc.









Agenda

- Review status of Performance Measures Workbook
- Summary Table
- Multimodal Transportation Assessment
 - VISSIM modeling tool
 - Overview of some performance measures
- Sampling of some performance measures
- ~20 minutes for Q&A









1. Pedestrian Access and Mobility
1a. Functionality of Streetside for Pedestrian Activity
1b. Separation from Vehicular Traffic
1e. Pedestrian Crossings
1f. Vehicle / Pedestrian Conflicts at Driveways
2. Bicycle Access and Mobility
2a. Separation of Bikes and Arterial Traffic
2b. Crossing Conflicts Between Bicycles and Vehicles
2e. Bike Network Connections
2f. Bicycle Corridor Travel Time
2g. Bike Crossing
3. Transit Access and Mobility
3b. Transit Stop Facilities
3c. Transit Corridor Travel Time
3e. Frequency and Hours of Service
3f. Accommodation of Future High Capacity Transit
3g. Riders per Vehicle
4. Vehicular Access and Mobility
4a. Movement of Through Traffic During Peak Traffic Periods
4b. Intersection Delay – Overall Intersection Performance
4c. Intersection Delay – Worst Movement
4e. Lane Continuity
4f. Access Management for Adjacent Properties
5. Person Access and Mobility
5a. Person Trips for Multiple Measures
6. Sense of Place
6a. Historic Resources
6b. Significant Resources
6c. Visual Quality
7. Environment and Public Health
7a. Greenhouse Gases
7b. Other Tailpipe Emissions
7c. Heat Island
7d. Water Harvesting and Green Streets Stormwater Management
8. Economic Vitality
8a. Change in Economic Potential
9. Project Cost
9a. Construction Cost
9b. Acquisition Cost
10. Certainty
10a. Ability to Provide for Changing Transportation Needs

Status of Performance Measure Assessments

- We will follow up with additional Performance Measures at the Thursday Charrette meeting
- CTF members also have post-it notes to take with your Performance Measure workbooks
- Please review the Performance Measures and write individual Post-Its with:
 - Questions
 - Concerns
 - Ideas for revisions
 - Etc.
- Post-Its will be used in group discussion exercise at Thursday meeting

1a. Streetside Functionality for Pedestrian Activity

Street Concept Alternative	Study Area Segment	Average Sidewalk Width (feet)	Average Difference in Sidewalk Width Compared with ITE Guidance (feet)	Length of Sidewalk "Weave" (feet)	Summary Score
4-Lane					
(Minimize Direct Building Impacts)	Full Length	14.86	-1.47	531	+
	West of Martin	15.35	-1.53	40	++
	East of Martin	14.55	-1.44	491	+
4-Lane					
(Minimize Property		(Internal		(Callant)	
Impacts)	Full Length	15.44	-1.59	113	++
	West of Martin	15.66	-1.55	75	++
	East of Martin	15.30	-1.62	38	++
6+2T Lane	Full Length	15.99	-1.49	0	+++
	West of Martin	15.76	-1.57	0	++
	East of Martin	16.13	-1.45	0	+++









2a. Separation of Bikes and Arterial Traffic

Street Concept Alternative	Study Area Segment	Pct. of bike facility (minus curb cuts) that is cycletrack	Length of bike facility (minus curb cuts)	Bike facility width	Summary Score
4-Lane (Minimize Direct Building Impacts)	Full Length	71%	12779.00	7 feet	+1/2
	West of Martin	75%	4786.00	7 feet	+1/2
	East of Martin	69%	7993.00	7 feet	+1/2
4-Lane (Minimize Property Impacts)	Full Length	76%	13907.00	7 feet	++
	West of Martin	79%	5352.00	7 feet	++
	East of Martin	73%	8555.00	7 feet	++
6+2T Lane	Full Length	75%	13597.00	8 feet	++1/2
	West of Martin	78%	5165.00	8 feet	++1/2
	East of Martin	73%	8432.00	8 feet	++1/2







6a. Historic Resources

	Building impacts	High Risk for Acquisition	Moderate Risk for Acquisition	Total Historic Impacts
4-LANE MINIMIZING BUILDING IMPACTS	2	78	6	86
4-LANE MINIMIZING PROPERTY IMPACTS	15	35	6	56
6+2	39	28	3	70



VISSIM Modeling

- Assess/compare cross section alternatives
- Assess effect of dedicated transit lane
- Evaluate two future volume scenarios
 - PAG 2040 (33% growth)
 - Reduced PAG 2040 (22% growth)
- Assess mode shift scenario

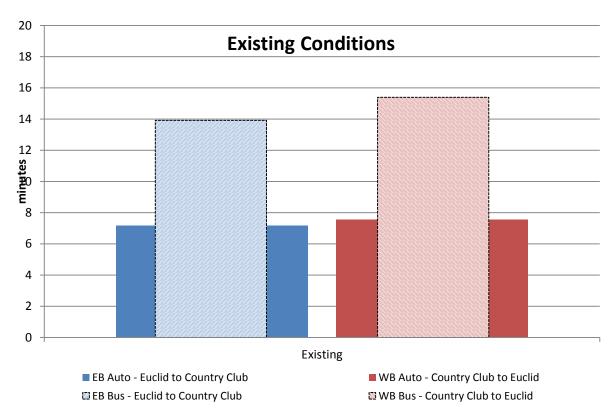








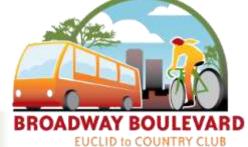
Existing Conditions



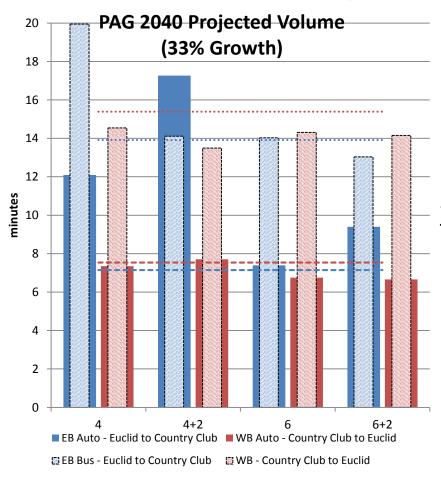


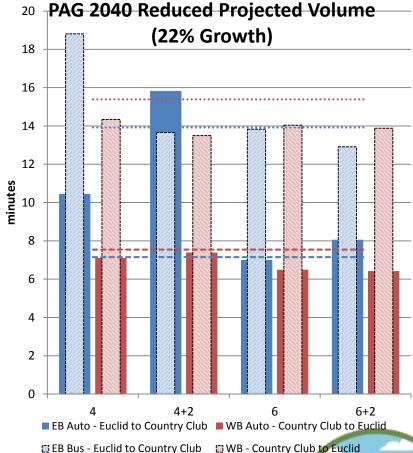






PAG Projected Volumes









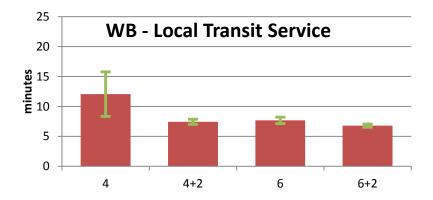




Transit Travel Time and Variation









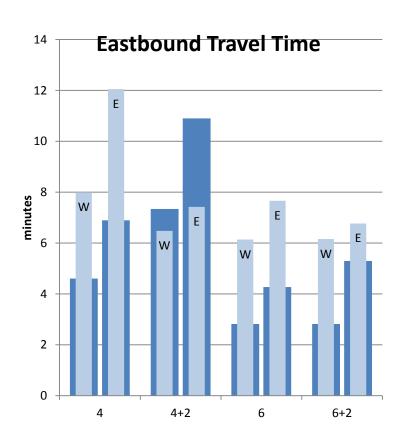


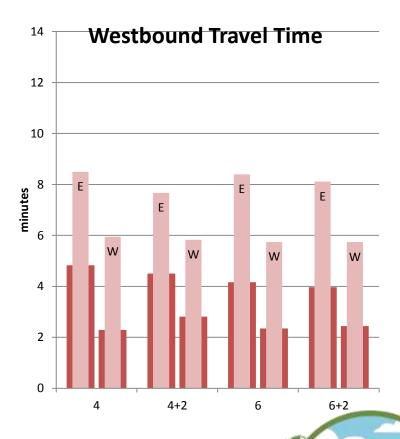






Eastern and Western Section Travel Time





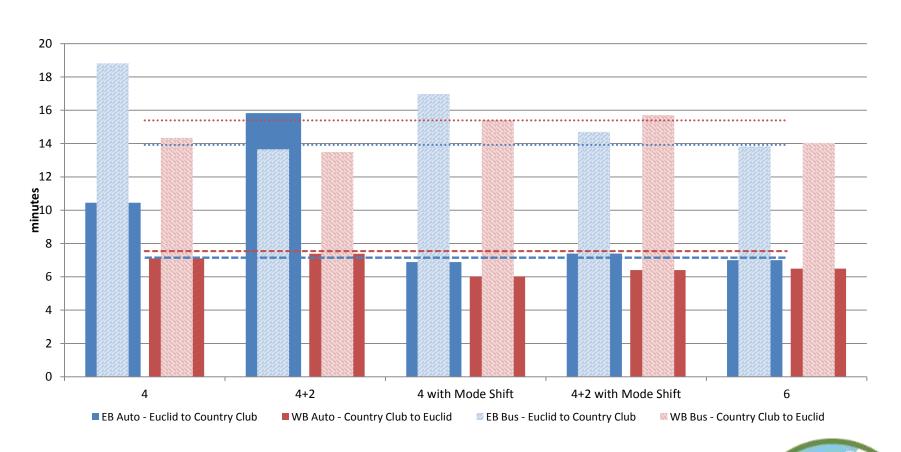








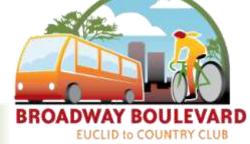
What if Scenario...Mode Shift



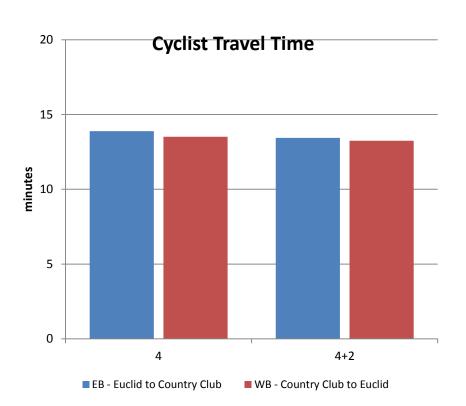


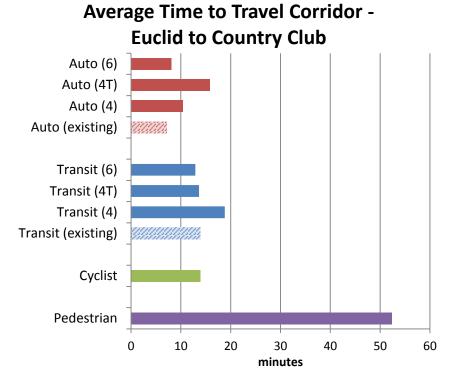






Multi-Modal Travel

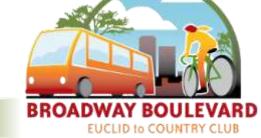




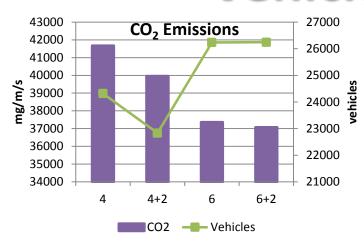


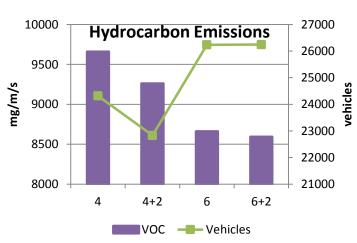


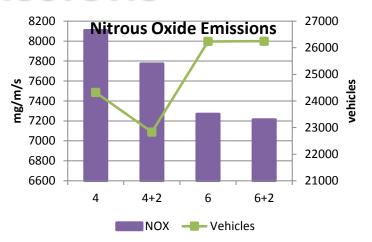


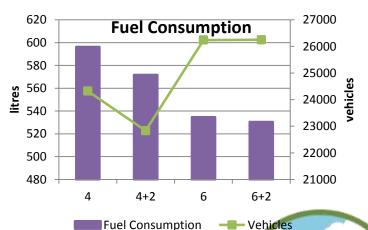


Vehicle Emissions

















5a. Person Trips for Multiple Measures

